

Cultivating the Impact of Sustainable Entrepreneurship: A Discussion of Upscaling Approaches in Entrepreneurial Ecosystems



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Abstract There is substantial knowledge about the peculiarities of founding entrepreneurial ventures in general. However, comparatively little is known so far about the characteristics of establishing sustainable ventures aiming at solving ecological or social problems in society. It is particularly uncertain how sustainable entrepreneurs could attain a successful upscaling of their venture ideas to expand their impact from a local niche at origin towards reaching broader society-wide impact. At this junction between local niche and the wider societal regime or landscape level, entrepreneurial ecosystems may play a key role in providing instrumental support for sustainable ventures. Entrepreneurial ecosystems offer initial support in the formation of new sustainable ventures but, also later, helping sustainable entrepreneurs in the upscaling of their sustainable venture ideas. In this chapter, we explore how entrepreneurial ecosystems could support the expansion of sustainable ventures and help overcome the barriers and dilemmas for successful sustainability upscaling.

The conceptual chapter discusses selected issues in the upscaling of sustainable ventures in the ecosystem context alongside typical barriers and dilemmas in sustainability upscaling. The contribution attempted in this chapter is to build a bridge between the literature strand on upscaling within sustainable innovation and the discussion of supportive ecosystems in the field of entrepreneurship. For example, we address the composition of ecosystem stakeholders and the importance of keeping a shared sustainability orientation in the ecosystem while integrating diverse stakeholders who provide resources for the upscaling process. The discussion in this chapter is based on reviewing recent literature on the upscaling phenomenon in sustainable innovation as well as on entrepreneurial ecosystems and sustainable entrepreneurship. In particular, we suggest that upscaling in entrepreneurial ecosystems may be understood as an open-ended evolutionary process, with ecosystem networks and stakeholder collaboration providing stable spaces for reflexive discourse and learning.

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1 The Need for Growing Sustainable Entrepreneurship Beyond the Local Niche

At the heart of venturing into a sustainable future, and in light of the urgent need to address climate change and meet other environmental challenges for society constituted in the UN's Sustainable Development Goals and their possible impacts (Pizzi et al., 2020; United Nations, 2015), two strategic thrusts will be key—to act fast and on a broad, ultimately global, scale. Sustainable entrepreneurs and their ventures can contribute substantially to meet these goals (Volkman et al., 2021) by “solving societal and environmental problems through the realization of a successful business [...] and promoting sustainable development through entrepreneurial corporate activities” (Lüdeke-Freund, 2020, p. 667; Schaltegger & Wagner, 2011). At the same time, from an entrepreneurship policy perspective, society should ask how societal stakeholders can support individual sustainable entrepreneurs in their journey to achieve impacts for wider society. Little is known so far as to “how ecosystems can specifically promote sustainable entrepreneurship” (Volkman et al., 2021, p. 1047). A critical step in this endeavour will be for sustainable entrepreneurs and their ventures to grow beyond their local supportive domain at the outset with the help of surrounding immediate regional stakeholders. In this chapter, we will reflect from a theoretical, conceptual perspective on the question:

How could entrepreneurial ecosystems support the expansion of sustainable ventures and help overcome the barriers and dilemmas for successful sustainability upscaling?

Considering the above research question, this chapter aims at bridging two strands of literature: first, the discussion of upscaling in the field of sustainable innovation and, second, the discussion of entrepreneurial ecosystem support for sustainable entrepreneurs and their ventures. As sustainable ventures may have to overcome specific barriers and dilemmas in the process of upscaling, it will be fruitful and important to explore how external support by ecosystem stakeholders could help to meet these challenges.

A strong emphasis has been put on how entrepreneurial ideas and ventures come into the world in the first place, and how this could be induced by entrepreneurial ecosystems and their stakeholders. However, beyond orchestrating the initial genesis of good entrepreneurial ideas, the above ecological call to act swiftly and strive for broad impacts requires further attention towards carrying sustainable ventures built on these ideas further into the world. This is since generally “[i]nventions with the potential to create positive ecological and social effects need to leave their niches to turn into effective sustainability innovations” (Lüdeke-Freund, 2020, p. 665; Boons et al., 2013).

Towards this end, sustainability and transition research offers a rich discussion on the phenomenon of upscaling towards society-wide sustainability (e.g. DiVito & Ingen-Housz, 2021; Augenstein et al., 2020; Bento & Fontes, 2021). In this chapter we consider *upscaling* as “an overarching theme embracing a qualitative shift where new ways of doing, thinking, and organizing interfere with the dominant structure and institutional context” (see van den Bosch & Rotmans, 2008, p. 33 and the second section below). In particular, sustainable entrepreneurs and their ventures could develop novel sustainable products, services or production procedures and aim at upscaling these innovations. These innovations and the business opportunities of sustainable entrepreneurs can be furthered by different forms of upscaling: embedding them into an existing socio-spatial context, translating them to another context (e.g. neighbouring regions or countries) and expanding them in size (Von Wirth et al., 2019). In the course of upscaling their ventures alongside these generic forms of upscaling, sustainable entrepreneurs will need to gain acceptance and legitimacy within the regime level (Augenstein et al., 2020; Bento & Fontes, 2021). Typically, there are barriers in this diffusion process from local, sustainable start-up ventures to fully fledged (inter-)national sustainable businesses. Cellina et al. (2018) highlight issues with societal acceptance in this process. Augenstein et al. (2020) highlight further dilemmas surrounding the understanding and communication to arrive at a shared common sense of novel sustainable innovation. In particular, they stress (ibid.) a possible “scaling aversion dilemma” as individuals—be it in civil engagement or sustainable entrepreneurship—may be sceptical of growing an idea or invention of a more sustainable product or service beyond their local domain (e.g. the region they live in).

Stakeholders surrounding individual sustainability inventors and entrepreneurs in regional entrepreneurial ecosystems may play a crucial role in overcoming such barriers in the critical early phase of upscaling (cf. the specific challenges of scaling sustainable entrepreneurship in Sect. 4). This may be, e.g. both by organizing institutional support for novel sustainability venturing and by motivating resource providers to avoid the self-selection of local sustainable entrepreneurs out of growing the impact of their ideas in an aversion to go beyond their protected local niche (e.g. as this may contradict with their initial purpose or as an expansion may necessitate an undesired orientation on aspects of economic and managerial efficiency). *Sustainable entrepreneurial ecosystems* at the regional or local level are domiciled at a critical junction when aiming at a successful upscaling of novel sustainability-oriented ventures as they represent “an interconnected group of actors in a local geographical community committed to sustainable development through the support and facilitation of new sustainable ventures” (O’Shea et al., 2021, p. 1097; Bischoff & Volkmann, 2018; Cohen, 2006).

By their very nature, such ecosystems are primarily concerned with assisting and nurturing sustainable entrepreneurship at their own proximal level. While ecosystems may “manifest on various levels. . . and the boundaries are permeable” (DiVito & Ingen-Housz, 2021, p. 1058), ultimately, sustainable ventures originate from the context of their local or regional ecosystem, which may be considered as a “regional development strategy with the objective of nurturing sustainable new ventures that

create social, environmental, and economic value in a community” (O’Shea et al., 2021, p. 1098). At the same time, helping the sustainable ventures in their ecosystems to grow (even beyond the local community) is also an integral part of the entrepreneurial establishment process. Sustainability research and research on sustainable entrepreneurship need to further explore possible tentative approaches for entrepreneurial ecosystems to contribute to meet the challenges and barriers in the upscaling of sustainable entrepreneurial ventures derived from the springboard of original local support. The chapter will highlight selected starting points for resolving this upscaling challenge in entrepreneurial ecosystems. We discuss different aspects, such as the potential for collaboration with other (inter-)national ecosystems and networks, the composition of stakeholders in the ecosystem who can facilitate upscaling of growing sustainable enterprises beyond initial local start-up support, or the scope for growing the ecosystem as a whole to improve the impact of valuable sustainable ventures.

The remainder of the chapter is structured as follows. The second part will briefly introduce the generic process of initial invention, innovative venture formation and further upscaling and growth of sustainable enterprises. This interim part is important for embedding the upscaling process into other concepts of entrepreneurial development such as the generic entrepreneurial process of opportunity recognition, evaluation and exploitation. In particular, for the challenge to grow the impact of sustainable ventures through upscaling, the exploitation phase will be important. Hence, in the third part, we will discuss the nature and barriers (or dilemmas) of upscaling sustainable enterprises embedded in the overall context of sustainable innovation. Because of these upscaling barriers and dilemmas, young sustainable ventures may require external support (e.g. resources and know-how) to grow their impact. One way to think about such a support infrastructure is to consider an ecosystem of external stakeholders to promote sustainable ventures. The fourth section introduces characteristics of entrepreneurial ecosystems relevant for gauging the issues and opportunities to support upscaling sustainable ventures within and beyond these ecosystems in the final part of the chapter.

2 Upscaling Within the Sustainable Entrepreneurial Process

So far, upscaling has been primarily discussed in the context of broader sustainable innovation (cf. Augenstein et al., 2020; DiVito & Ingen-Housz, 2021). Hence, an exploration of upscaling in the more specific domain of sustainable entrepreneurship and surrounding entrepreneurial ecosystems requires further clarification. Generally, upscaling refers to “a qualitative shift where new ways of doing, thinking, organizing interfere with the dominant structure and institutional context of an experiment” (van den Bosch & Rotmans, 2008, p. 33). In the context of sustainable entrepreneurship, this goes beyond solely economic growth and geographical expansion (van

den Bosch & Rotmans, 2008, p. 34f.). Contrarily, upscaling sustainable ventures refers to a diffusion, acceleration or amplification beyond niche experimentation (Augenstein et al., 2020). To demarcate the upscaling of sustainable entrepreneurial ventures from the broader context of sustainable innovation, the nexus between the two phenomena is understood best from a process perspective.

Typically, the emergence of innovation in society is conceived as a generic process of earlier invention (e.g. based on a novel technology), introduction to society as an innovation and subsequent diffusion. Traditionally, venture formation is considered an overall entrepreneurial process of opportunity recognition, evaluation and exploitation (Shane & Venkataraman, 2000) linked to the market logic of the specific product, service or process innovation. For sustainability, the two phenomena of sustainable venturing (as green or social entrepreneurship) and innovation have been linked earlier, e.g. by Schaltegger and Wagner (2011). At the focal actor level, the former is pursued by individual entrepreneurs founding sustainable business ventures, while the scope of the latter is broader, for example, ignited by eco-activists, NGOs, employees of established organizations or within social movements and citizenship involvement. Obviously, the two groups of actors are closely related. Sustainable entrepreneurship may be considered one path of innovative societal change, in this case as initial entry and further scaled growth within the marketplace or society (ibid.). Upscaling, in general sustainable innovation, may be more geared towards reaching a higher impact for social stakeholders and improving societal well-being (DiVito & Ingen-Housz, 2021). Our discussion in this chapter zooms in on approaches towards upscaling as a furthering of sustainability, in particular for social and ecological benefits, through entrepreneurial activities initiated and to be expanded by entrepreneurs and surrounding supportive ecosystem stakeholders (see the next section for a further differentiation of upscaling itself).

At the operational level, the two process thrusts of invention-innovation-diffusion and opportunity recognition-evaluation-exploitation both may evolve in open-ended processes. In their discussion of a convergent process model of sustainable entrepreneurship, Belz and Binder (2017) explore a multiphase process of recognizing a social or ecological problem and subsequent opportunity, the identification of a double, then triple, bottom-line resolution, followed by the market entry with a new sustainable enterprise. In particular, in their study the authors (ibid.) found that social, ecological and economic sustainability dimensions may be taken on board sequentially (rather than all at once) in a process unfolding over time.

Two linkages between these levels seem most important for our discussion in this chapter. First, within this co-evolution, pressing social and ecological problems within a societal domain or regime and subsequent opportunities to be recognized will be acted upon by individual sustainable entrepreneurs at the grassroots level. Second, in the pursuit to enlarge the impact of their opportunities, sustainable entrepreneurs have to tackle the central challenge of upscaling to gain acceptance from surrounding societal institutions and obtain resource support from benevolent immediate ecosystem stakeholders in particular. These stakeholders may team up with individual sustainable entrepreneurs at the local community level at the start,

trying to scale into the wider societal regime to address the social and ecological problems previously identified with a broader impact. This interrelated co-evolutionary perspective of surrounding regime context to be made more sustainable through upscaling by individual sustainable entrepreneurs and supporting stakeholders will also be suggested as a fruitful avenue for further research at the end of this chapter. In the following two sections, we will introduce sustainability upscaling more specifically and highlight the characteristics of (sustainable) entrepreneurial ecosystems as the arena in which upscaling attempts of sustainable entrepreneurs will unfold.

3 The Upscaling Challenge: Characteristics and Barriers of Upscaling Sustainable Enterprises

To maximize their positive social and ecological impact, sustainable enterprises have to take the leap from niche to mainstream. Within the entrepreneurship context, upscaling refers to the maximization of purely economic concerns, such as profit and market share. However, sustainable enterprises see their purpose in contributing to global sustainable development (Schaltegger & Wagner, 2011). Hence, a solely business-focused approach to upscaling does not apply to the context of sustainable entrepreneurship; therefore, the process and dilemmas of scaling sustainable entrepreneurship require further investigation.

3.1 Upscaling of Sustainable Entrepreneurship from a Transition Perspective

Sustainability and transition research offer a rich discussion on the phenomenon of upscaling towards society-wide sustainability (e.g. DiVito & Ingen-Housz, 2021; Augenstein et al., 2020; Bento & Fontes, 2021). The business models and opportunities of sustainable entrepreneurs can be promoted by embedding them into an existing socio-spatial context, translating them to another context (e.g. neighbouring regions or countries) or scaling them in size (Von Wirth et al., 2019). These modes of upscaling face the need to gain acceptance and legitimacy beyond the initially protected niche they originated from (Augenstein et al., 2020; Bento & Fontes, 2021).

In these options for scaling, sustainable entrepreneurship often challenges the logic of the market system and seeks to offer alternative approaches (Palzkill & Augenstein, 2021). Generally, enterprises can intend to achieve a balance between adaptation to existing structures, for the purpose of scaling up within existing markets to establish sustainable alternatives in the system from within (Wells, 2016, p. 5). Nonetheless, in practice, entrepreneurs often feel like they are risking

a compromise of their own sustainable values, leading them to avoid upscaling and keep their sustainability-oriented organizations relatively small (Hockerts & Wüstenhagen, 2010, p. 487). As upscaling refers to a path of change outside the niche to the regime level within the multilevel perspective on system transitions, this offers a crucial background on the discussion of upscaling sustainable ventures. The multilevel perspective conceptualizes the transition of sociotechnical systems as a complex and profound process of change across various levels (Geels, 2011). System transitions are understood as “major, non-linear changes in societal cultures, structures and practices [...] that arise from the coevolution between economy, society and ecology” (Loorbach & Wijsman, 2013, p. 22). Sociotechnical systems are divided into three levels (landscape, regime, niche), each defined by a different degree of structuration, meaning the degree to which actors are bound by dominant structures (Geels, 2011; O’Shea et al., 2021). There have also been attempts to integrate sustainable entrepreneurship into the multilevel perspective, concluding that sustainable entrepreneurs could be key actors in sustainability transitions (i.e. Hörisch, 2015; Schaltegger et al., 2016; Wells, 2016). Nonetheless, the role of business in societal transitions requires further exploration, especially with attention being paid to firm size (Loorbach & Wijsman, 2013, p. 27). Generally, Hockerts and Wüstenhagen find that smaller, less established businesses are more likely to “pursue sustainability related opportunities” (Hockerts & Wüstenhagen, 2010, p. 481). As entrepreneurs do not need to fear destroying their own, established business models, they can exert pressure on incumbents by creating radical sustainability-oriented innovations (Hörisch, 2015). As sustainable entrepreneurs can oftentimes be characterized as idealists, they set high sustainability standards and experience high levels of credibility (Hockerts & Wüstenhagen, 2010). Currently, most sustainable enterprises find themselves on the niche level, where they take on the crucial role of pioneering sustainability transitions, wanting to expand into the regime and ultimately the landscape level (Hockerts & Wüstenhagen, 2010; Geels, 2011). However, they face barriers in this diffusion process from local, sustainable start-up ventures to fully fledged (inter-)national sustainable businesses.

3.2 Upscaling Dilemmas

According to Wesseling et al. (2020) and Huijben et al. (2016), niches may scale up and try to become a part of the regime through a “fit and conform” approach within the space of given structures. Alternatively, they can aim to “stretch and transform” the given space by establishing their own alternative values and logics (Huijben et al., 2016, p. 2). Both approaches are deemed as promising, especially in the context of landscape pressure, where sustainable entrepreneurs offer a new solution (Wesseling et al., 2020, p. 156). Sustainability-oriented entrepreneurs are often confronted with a trade-off between opportunities to scale them from the niche and the radicality of their activities and when there is a lack of landscape pressure (Smith & Raven, 2012, p. 1030). Hence, it is crucial for sustainable ventures

operating at a niche level to find a productive way to deal with this dilemma (Palzkill & Augenstein, 2021).

In the protected niche exist different logics than on the regime or landscape level. How can sustainable enterprises persist in a market- and profit-oriented regime while following different logics and eventually contributing to sustainable systemic change? The challenges associated with upscaling efforts of sustainable ventures can be categorized as a fundamental dilemma (Augenstein et al., 2020; Augenstein, Palzkill et al., 2020). Common barriers leading to the failure of sustainable ventures are a lack of vision and ambition in regulation, the dominance of large, incumbent firms that act in closed networks as well as old routines and beliefs among business actors (Klein Woolthuis, 2010). From a business perspective, Cellina et al. (2018) stress particular problems with societal acceptance in this innovative change, for instance, low stakeholder and institutional receptiveness or “sticky” traditional ways of doing things and resource deployment lock-ins. Augenstein et al. have identified three dilemmas concerning the upscaling process of sustainable niches from a transitions perspective (2020):

1. The *Babylon dilemma*, which refers to challenges of inter- and transdisciplinary knowledge integration
2. The *simplification dilemma*, highlighting how an oversimplified interpretation of transition processes can be harmful
3. The *scaling-aversion dilemma*, describing a hesitation to scale by innovative actors (e.g. sustainable entrepreneurs or activists) themselves

With regard to sustainable ventures, entrepreneurial ecosystems could provide a potential environment to overcome upscaling challenges, since networks and capacity building are critical in this context.

4 The Potential Role of Entrepreneurial Ecosystems

Having discussed the nature of upscaling the business ideas and ventures of sustainable entrepreneurs, we next introduce the ecosystem context in which the process of establishing and upscaling sustainable ventures is embedded. Generally, an entrepreneurial ecosystem is “a dynamic community of interdependent actors [...] and system-level institutional, informational, and socioeconomic contexts” (Audretsch & Belitski, 2017, p. 4). Typical elements of entrepreneurial ecosystems directed at the support of new ventures are, e.g. social networks of actors (who may provide resources and knowledge), physical and financial resources as well as human capital and knowledge (available to the resource base of sustainable ventures) or means of consumption (demand for sustainable products and services) and entrepreneurial outputs (new ventures or corporate entrepreneurial activity) (Stam & Van de Ven, 2021; Kansheba & Wald, 2020).

4.1 Entrepreneurial Ecosystems in the Context of Sustainable Entrepreneurship

Within the universe of entrepreneurial ecosystems, entrepreneurial ecosystems have been characterized above as those groups of community actors supporting sustainable ventures and development (O’Shea et al., 2021). For example, O’Shea et al. (2021) discuss a sustainable ecosystem in Helsinki, Finland, aiming at replacing non (or less) sustainable materials (e.g. plastic or cotton) with novel cellulose-based products in existing industries. Such efforts of sustainable entrepreneurship focal in these ecosystems generally envision the creation of “future goods and services that sustain the natural and/or communal environment and provide development gain for others” (Patzelt & Shepherd, 2011, p. 632). In contexts of industry innovation like in the example above, typically, sustainable entrepreneurs have to balance complex trade-offs between socioecological and economic sustainability (DiVito & Ingen-Housz, 2021; Hahn et al., 2015). Principally, in the face of such trade-offs when competing against existing non-sustainable businesses, the recognition and exploitation of sustainable business opportunities may be comparatively more complex and challenging (Patzelt & Shepherd, 2011; also see the discussion of additional challenges in terms of gaining acceptance and acquiring resources faced by sustainable entrepreneurs further below). At the same time, sustainable (and other) entrepreneurs cannot build their ventures independently in isolation from the resource provision and support of external stakeholders (Schaltegger & Wagner, 2011; Stam & Van de Ven, 2021). Considering the importance of entrepreneurial context (Volkman et al., 2021; Pankov et al., 2021; Welter et al., 2019) beyond personality-based entrepreneurship (Stam & Van de Ven, 2021), the issue of suitable forms of tailored support for sustainable entrepreneurs in entrepreneurial ecosystems (Bischoff, 2021) is pivotal.

4.2 Challenges of Sustainable Entrepreneurship

On the one hand, it has been supposed that challenging and uncertain entrepreneurship may grow in traditional entrepreneurial ecosystems in general with beneficial flows of resources and knowledge between actors (Kuratko et al., 2017). However, on the other hand, the functioning of specific ecosystem support for sustainable entrepreneurship is still unclear (Volkman et al., 2021; Fichter et al., 2016). DiVito and Ingen-Housz (2021, p. 1058) reason that “sustainable entrepreneurs may require different ecosystems where actors interact and provide support in significantly different ways than in traditional entrepreneurial ecosystems” (also cf. Neumeyer et al., 2019). For the discussion of approaches to support the upscaling in the context of entrepreneurial ecosystems for future research, it seems most suitable to further explore the principal challenges faced by sustainable entrepreneurs. This is at the heart of establishing and growing their ventures beyond their initial niche in

interaction within their local ecosystem. To provide adequate support, entrepreneurial ecosystems will have to assist sustainable entrepreneurs in tackling a range of potential challenges different from productive for-profit entrepreneurship:

- Long-time horizon towards establishment and institutionalization of sustainable ventures: sustainable entrepreneurs aim to solve “grand societal issues —for example, climate change, water preservation and poverty (DiVito & Ingen-Housz, 2021, p. 1064). Providing entrepreneurial responses to these millennium problems by developing and establishing sustainable goods and services takes particular time. This may require long-term relationships in ecosystem networks with other stakeholders, including other firms alongside changing value chains (ibid.). Principally, the route to institutionalizing novel sustainable approaches that may transform industries or other societal domains may be very long. And it requires gaining acceptance beyond the initial ecosystem niche where a sustainable solution for an ecological problem has emerged and where initial interaction with community stakeholders may provide initial benevolent legitimacy (Kuratko et al., 2017).
- Entrepreneurial process of establishing sustainable ventures requires different actors: the process of recognizing, evaluating and exploiting sustainable business opportunities features different stages. In the latter exploitation stage, entrepreneurial (or even managerial) actor mindsets may play an important role in organizing and expanding sustainable ventures within an ecosystem (Kansheba & Wald, 2020). Earlier on, the discovery of sustainable opportunities may be triggered by “recognizing an a priori social or ecological problem” (O’Shea et al., 2021, p. 1098; cf. Belz & Binder, 2017). At this initial stage, activist groups may be important to raise an ecological problem in the first place upon which later technological, entrepreneurial and managerial efforts to invent and market sustainable products or services may come into play. During technical invention and entrepreneurial market entry, founders of sustainable ventures may encounter additional regulatory complexity when establishing sustainable manufacturing procedures. Overall, “the recognition and exploitation of sustainability opportunities may require different actors —those that highlight the issues, those that invent alternative products or materials and those that take entrepreneurial action” (DiVito & Ingen-Housz, 2021, 1064). For a functioning (sustainable) entrepreneurial ecosystem supporting the entire entrepreneurial process, many different and heterogeneous players will likely have to come together with sometimes diverging interests.
- Dispersion of benefits and outcomes of sustainable entrepreneurship: in sustainable entrepreneurship, outputs may be spread more widely with comparatively more collective benefits for society. These external effects make it harder for sustainable entrepreneurs to internalize the value of the innovations they have made (York & Venkataraman, 2010). In consequence, sustainable entrepreneurs may face additional barriers to attracting external financing (DiVito & Ingen-Housz, 2021) and more difficulties in their long-term market establishment when competing with non-sustainable businesses (York & Venkataraman, 2010).

4.3 Conditional Aspects of (Sustainable) Entrepreneurial Ecosystems

The agenda of entrepreneurial ecosystems to support sustainable ventures and their entrepreneurs may unfold alongside the above principal challenges. Supposedly, most of these challenges and the further issues that result from them in the task to build sustainable ventures may also play a role when it comes to growing these ventures by scaling their impacts in society. During such upscaling, sustainable entrepreneurs and their ecosystems may also have to overcome the specific barriers discussed in chapter three above. At the same time, generic elements or conditional aspects of sustainable entrepreneurial ecosystems offer starting points for developing specific forms of support for growing sustainable ventures striving to balance the pursuit of ecological, social and economic value creation (Klofsten et al., 2016). In their discussion of the composition of functional, entrepreneurial ecosystems, DiVito and Ingen-Housz (2021) put forth the following conditional aspects fuelled by an array of interrelated ecosystem elements (Stam & Van de Ven, 2021). These conditional aspects also differentiate sustainable entrepreneurial ecosystems from traditional entrepreneurial ecosystems:

- Sustainability orientation of actors: While many different actors may be required to propel sustainable venture creation as reflected in the challenges of sustainable entrepreneurship introduced above, a potential catalyst to enduring support of sustainable entrepreneurs may be a shared motivation for sustainability by ecosystem stakeholders. O’Shea et al. (2021, p. 1099) found that a “shared wish for sustainability and a supporting emotional climate enables the collective creation not only of new knowledge but also of socio-ecologically impactful business, and hence, such communities are meta-enablers for a sustained engagement with the ecosystem beyond an individual’s efforts at venture creation”.
- Recognition of sustainable opportunities and resource mobilization: Such a common agenda of stakeholders’ sustainability orientation to address pressing ecological sustainability issues to make a targeted aspect of community life more sustainable might also be the anchor, not only for disseminating the importance of these issues but also for mobilizing and assembling resources to develop solutions and bringing them to bear in society and the marketplace. Such sources of potential resource support will also have to be considered when sounding out possibilities for further increasing the impact of sustainable ventures through upscaling. This is since it will require prolonged resource acquisition for sustainable venture projects to expand beyond their original community ecosystem.
- Collaborative innovation of sustainability opportunities: A further potential force of entrepreneurial ecosystems at the local community level may be the scope to co-operate across different sustainable ventures and other sustainable development initiatives with stakeholders supporting various sustainability projects in the network.

- **Markets for sustainable goods and services:** For sustainable entrepreneurship, in particular, ecosystem communities may serve as an initial springboard or showcase of demand for products and services rooting from sustainable venturing (York & Venkataraman, 2010). Such demand volumes may both support further experimentation with adequate designs and production procedures before future expansion and help build a viable showcase when targeting additional geographical target groups and convince societal institutions in the course of upscaling and transformation.

These integral conditional aspects suggested recently by DiVito and Ingen-Housz (2021) may assist sustainable entrepreneurs in different parts of sustainable development from initial agenda setting of novel ecological and sustainability issues across interim steps of founding and crafting an initial resource base for ventures to developing sustainable product and service solutions. In addition, however, these conditional ingredients may also be considered potential entry points to support sustainable entrepreneurs towards future growth and scaling beyond initial establishment. This is the central concern of this chapter. In the literature on entrepreneurial ecosystems, so far the discussion about entrepreneurial ecosystems has mainly centred around supporting the early-stage formation of ventures (rather than their later expansion and growth). And where expansion has been considered, this has been mainly done from the perspective of economics. In this perspective, the literature has mainly looked at business growth of ventures in the marketplace but not through the lens of expanding the impact of sustainable ventures and their ideas in society through upscaling. In the next section, we will therefore delve further into our discussion of supporting and orchestrating upscaling of sustainable entrepreneurship in the ecosystem context. This discussion will address different approaches alongside potential barriers and dilemmas to upscaling and the possible challenges faced by sustainable entrepreneurs introduced in the previous sections above in correspondence with the conditional aspects of sustainable ecosystems just highlighted.

5 The Scope for Supporting Upscaling of Sustainable Entrepreneurship Beyond Regional Entrepreneurial Ecosystems

Within the broader society, ideas or inventions for more sustainability may be introduced and scaled from social movements such as eco-activist groups or civil involvement activities in communities. As such, these activities may be embedded genuinely in a more prosocial context to solve environmental and other problems for society. In comparison, upscaling derived from sustainable entrepreneurial venture projects may be geared more towards introducing sustainability in an economic market logic format. This may have important implications for upscaling in entrepreneurial ecosystems, e.g. concerning the characteristics of external stakeholder

support and perceptions of capturing societal versus individual benefits from sustainable entrepreneurial activities (cf. DiVito & Ingen-Housz, 2021). Overall, the discussion of upscaling dilemmas as well as the typical challenges faced by sustainable entrepreneurs has shown that scaling the impact of sustainable ventures may be quite difficult. In similarity to sustainability scaling from naturally social or ecological activism in the niche, sustainable entrepreneurship will also require a stable space (cf. Augenstein et al., 2020) for—in this case, entrepreneurial—experimentation and learning at the local ecosystem level. Apart from the few born global start-ups, also in entrepreneurship, most venture projects, including sustainability-oriented start-ups, start small at the community level (Stam & Van de Ven, 2021) and will be anchored in a local support system. And any substantial growth will also imply moving outside the local supportive niche. As difficult a task as this may be in the end, entrepreneurial ecosystems at the local or regional level will be a natural starting point for sustainable ventures to pursue further upscaling to increase their impact.

The trade-off between impact and profit or more abstractly radicality and conformity poses the ultimate upscaling barrier (Smith & Raven, 2012). In order to tackle this overarching dilemma and avoid trade-offs, especially regarding impact and profit, a transformation at the regime and landscape level is needed. A purely local or regional-focused ecosystem will not be able to achieve this kind of transition while operating in the niche. Hence, some ecosystems will become independent from local or physical boundaries and expand to a national or international level (DiVito & Ingen-Housz, 2021). Some ecosystems have produced independent initiatives working on a higher level to ultimately support actors coming out of the niche. The Purpose Initiative is one successful example for this development. It aims to promote “steward-ownership”, a new kind of legal entity, which promises to enable enterprises to preserve their purpose even when growing outside their niche (for further information see <https://purpose-economy.org/>).

Augenstein et al. argue that to address dilemmas of upscaling, research and practice should more explicitly focus on the creation and stabilization of spaces for reflexive learning and critical discourse, on network and capacity building (2020). With regard to sustainable ventures, entrepreneurial ecosystems could provide just the right environment to overcome upscaling challenges. Such protected niches provide the space and support system for creating inventions, testing innovations and entrepreneurial experimentation. Sustainable entrepreneurs generally benefit immensely from interacting with each other, underlining the need for collaborative infrastructures (Patzelt & Shepherd, 2011). The Circular Valley in Wuppertal is an example for the creation of a sustainable entrepreneurial ecosystem. The initiative aims to build a supportive environment where sustainable entrepreneurs can develop their ideas in collaboration with stakeholders from business, politics, science and civil society. Ultimately, the goal is to advance the transition towards a circular economy in the Rhine-Ruhr region through entrepreneurial action (for further information see <https://circular-valley.org/>).

Within this upscaling task, sustainable entrepreneurs and their ecosystem stakeholders will encounter the above challenges for sustainable ventures and upscaling

dilemmas along the way against the background of important conditional aspects of sustainable ecosystems (DiVito & Ingen-Housz, 2021). This is in particular for resource mobilization and collaboration between stakeholders including the sustainable ventures themselves as envisioned in the above example of the Circular Valley. Correspondingly, this section discusses the potential role of entrepreneurial ecosystems in upscaling processes alongside the three scaling dilemmas above —the Babylon dilemma and the simplification dilemma (5.1) and the scaling aversion dilemma (5.2).

5.1 The Effect of the Babylon and the Simplification Dilemma on Upscaling in Entrepreneurial Ecosystems

The Babylon and the simplification dilemmas of upscaling are closely interconnected. Both were initially observed in the setting of transdisciplinary research on sustainability transitions (Augenstein et al., 2020). However, there is a case to be made for the appearance and overcoming of these dilemmas regarding upscaling sustainable enterprises in the context of entrepreneurial ecosystems.

Generally speaking, the Babylon dilemma refers to the challenge of understanding the precise meaning of upscaling; hence, its solution requires inter- and transdisciplinary knowledge integration (Augenstein et al., 2020). Since actors and stakeholders in entrepreneurial ecosystems are highly heterogeneous, their individual understandings of the process, purpose and objective of scaling sustainable enterprises are also very likely to vary (Bischoff & Volkmann, 2018).

With regard to the overarching dilemma of navigating the critical mass of conformity and radicalness when scaling from niche to regime and landscape levels, these tensions between different logics are likely to arise also in the context of entrepreneurial ecosystems. This is since entrepreneurs and stakeholders might follow widely diverse logics, which could potentially result in conflicts of interest. As mentioned, upscaling could also be interpreted as a solely market-based growth process. This definition is widely accepted and assumed within the entrepreneurship nexus and entrepreneurial ecosystems. As sustainable entrepreneurs rarely adopt a “growth-only” mindset and are more likely to focus on maximizing their positive impact, their own logics might clash with other actors, who follow traditional economic values. This applies in particular to financial stakeholders such as formal investors who are more likely to follow the maximization of profits as their ultimate goal. Within an entrepreneurial ecosystem, this draws the need for a shared sustainability orientation and a common purpose for the ecosystem. Building this kind of shared vision within an ecosystem, it might be tempting to only include stakeholders with similar values and logics sets. Although helpful in designing a designated protected niche for sustainable entrepreneurs, a homogenous group of stakeholders will unlikely produce the best support system for upscaling outside of the niche. In line with the overarching dilemma of upscaling concerning the tension between

conformity and radicalness, including a diverse group of actors with values ranging from radical niche activist to regime-conforming business angel is most likely to result in a successful upscaling process. A balance of actors following niche, landscape and regime logics will provide a suitable environment for creating disruptive sustainable enterprises.

In order to attempt to overcome the Babylon dilemma, a shared understanding of upscaling sustainable entrepreneurship across the entire ecosystem is needed to a certain extent (DiVito & Ingen-Housz, 2021). However, this does not entail the non-existence of diverting values and logics, as a plurality of understandings is necessary and space for reflexive discourse between actors is needed. Otherwise, the process of upscaling is going to be disturbed by oversimplification. Actors who possess a certain level of transformative literacy and can unite multiple logics become critical in this dilemma (Singer-Brodowski & Schneidewind, 2014), possibly acting as boundary-spanning relationship promoters (see below for the discussion of such promoter roles to support sustainable entrepreneurship). Such boundary-spanning relationship building and communication may also help overcome institutional fragmentation as a typical barrier in upscaling (Cellina et al., 2018).

The simplification dilemma addresses the struggle between clearly defining processes of change by reducing them to more easily understandable concepts and replicable practices on the one hand and the necessity to grasp and embrace their complex nature on the other. Though accepting the intricacy of social change is challenging, innovation and transformation remain unpredictable and uncontrollable and need to be treated as such (Augenstein et al., 2020).

5.2 Approaching the Scaling Aversion Dilemma in Entrepreneurial Ecosystems

The scaling aversion dilemma as a barrier towards upscaling may be critical in particular because it undermines ambitions to scale promising sustainable venture projects right at the micro-level of ecosystem actors. Scaling aversion in the context of entrepreneurial ecosystems may arise in different forms:

- As an aversion of local ecosystem stakeholders critical to the support of scaling sustainable ventures
- Scaling concerns by sustainable entrepreneurs themselves
- Both emerging at the local or regional community level as an aversion to scale beyond the local niche towards a broader regime or even landscape level

Fundamentally, these forms of scepticism towards nurturing sustainable venturing originate from the above principal dilemma to handle the tension between pronounced and sometimes radical entrepreneurial sustainability ideas on the one hand, and requirements to portray conformity to a larger institutional regime, e.g. a

specific regional industry often functioning in a traditionally non-sustainable fashion, on the other (Palzkill & Augenstein, 2021; Sung & Park, 2018). To resolve this tension, Augenstein et al. (2020) suggest establishing learning and discourse spaces such as entrepreneurial ecosystem architectures allowing for experimentation with different resolution paths with regard to the above principal tension. This may be particularly valuable for sustainable entrepreneurship as it is especially difficult to scale into existing economic regime structures such as an established supply chain with standardized product and material flows by showing conformity.

Scaling Aversion of Ecosystem Stakeholders, Including Entrepreneurs

Different stakeholders relevant to sustainable ventures might articulate aversions to support scaling the impact of these ventures. Stakeholders from existing economic regimes following a traditional market logic (e.g. important suppliers and distribution partners or traditional local economic policymakers) may oppose sustainable innovations which interfere with existing economic structures and institutionalized routines. However, other stakeholders with a strong sustainability orientation may be concerned that attempts to scale into and de facto conform to an existing economic regime may deviate too far from the original sustainability purpose. For example, such an ecological dilution as sustainability gets introduced from within a system (Wells, 2016) may be averted, particularly by activist groups or NGOs who do not depend on economic market logic. In view of this problem, it may be imperative for entrepreneurial ecosystems to develop and strengthen a sustainability orientation among participating core stakeholders who aim to build and support sustainable entrepreneurial ventures (O'Shea et al., 2021) as a conditional feature of thematic ecosystems focusing on sustainability (DiVito & Ingen-Housz, 2021). Perhaps such a shared perspective may even be strengthened further by zooming in on a particular sustainability or green technology theme such as promoting specific forms of renewable energy or sustainable materials. Deliberately designed components of entrepreneurial ecosystems could actively select and invite stakeholders who share a principal ecological vision towards a sustainable society. At the same time, it will be required also to take on board further stakeholders who hold essential resources necessary for scaling sustainable ventures.

In addition to concerns about losing one's sustainability focus and original purpose, typically nascent and early-stage entrepreneurs aiming to expand the scope of their ventures worry about a lack of knowledge to run and grow their (sustainable) enterprise and difficulties to assemble an adequate resource base (Krueger, 2003). Because of these characteristic resource challenges and regulatory obstacles, entrepreneurs themselves often self-select out of growing their firms (e.g. in the renewable energy sector; Grünhagen & Berg, 2011) or even abstain from founding a venture as sustainable entrepreneurial intentions fail to manifest in the first place because of concerns that resource acquisition and market entry would be unfeasible (Vuorio et al., 2018).

The critical issue of resource mobilization for sustainable venture opportunities ought to be a genuine ingredient of sustainable entrepreneurial ecosystems within the niche in general (DiVito & Ingen-Housz, 2021). Ecosystems need benevolent stakeholders who favour sustainability solutions, e.g. alongside a shared

sustainability orientation or thematic ecological vision and provide resources to get sustainable entrepreneurs to start up initially. This may account for both material resources such as funding and tacit knowledge sources that flow in local ecosystems with close geographical proximity (DiVito & Ingen-Housz, 2021). In addition, an attentive local ecosystem niche could also fulfil an important function beyond helping entrepreneurs assemble a first resource base (Brush et al., 2001) in that the ecosystem provides a protected niche to build an initial showcase. Such a showcase would be instrumental in showing that the sustainable business ideas of founders do actually work, providing a proof of concept. This may be by stakeholders' offering upfront resources for experimentation or local/ regional markets for innovative product and service offers of sustainable ventures as a conditional aspect of a working sustainable ecosystem (DiVito & Ingen-Housz, 2021). The interaction and resource exchange with ecosystem stakeholders may thus provide a source of legitimization (Patzelt & Shepherd, 2011). Gaining legitimacy is critical for any new organization (Suchman, 1995)—for controversial sustainability ventures or ideas in particular. In this regard, a certain degree of diversity and institutional fragmentation (Cellina et al., 2018) of stakeholders in local entrepreneurial ecosystems may even be functional, since diverse stakeholders may have different interests and expectations towards sustainable ventures allowing entrepreneurs to select those stakeholders who are easier to convince (cf. Suchman, 1995). Acquiring resources for upscaling, i.e. additional to an initial source base operating on a merely small scale at niche level, will likely involve a long-time horizon towards establishment at a higher regime level to address ecological issues like climate and water preservation (DiVito & Ingen-Housz, 2021). For ecosystems, this may necessitate long-term collaboration and network relationships with supportive stakeholders to overcome institutional inertia surrounding adverse traditional stakeholders and non-ecological practices (Cellina et al., 2018).

In sum, the salient challenge of gaining passive acceptance and, more importantly, legitimated active resource support (Suchman, 1995) for a sustainable venture opportunity may result in substantial aversion with regard to a further scaling of sustainable ventures from the perspective of sustainable entrepreneurs or individual supportive stakeholders at the micro-level. However, through the lens of overall ecosystem support, “opportunities are networked, socially constructed occurrences that require coordinated efforts in entrepreneurial ecosystems” (DiVito & Ingen-Housz, 2021, p. 1071). In an ecosystem where stakeholders and entrepreneurs collaborate, actors may jointly develop opportunity confidence (O’Shea et al., 2021) to build and scale sustainable ventures together. The goal is to avoid individual entrepreneurs to refrain from striving for scaling their ideas in a posture of scaling aversion on ground of concerns that any scaling attempt would appear unfeasible with insufficient individual resources. In addition, sustainable entrepreneurs and the stakeholders around them might also have an aversion to crossing the border of their local niches or communities.

5.3 *Aversion to Scale Beyond the Community Niche*

Many initiatives in sustainable entrepreneurship and other forms of civic engagement for sustainability originate bottom-up from recognizing and acting upon identified ecological or social problems at the local community level. For scaling the impact of these initiatives, it will be essential to consider that many entrepreneurs and other stakeholders participating in bringing to life and establishing sustainable ventures may likely not strive for further dissemination towards the regime level or society in general (Augenstein et al., 2020; Pesch et al., 2019; Smith et al., 2014). The reasons for this potential hesitation of individual actors as they self-select out of scaling their ideas beyond the community level are still unclear in transition and sustainability research. For example, actors may have reservations against taking organizational or managerial steps to expand their ventures, including the additional efforts in resources and time this would require or an individual preference to address an ecological issue merely in one's own geographical or cultural niche. One critical aspect that could further contribute to scaling aversion in relation to the economic sustainability initiatives of sustainable ventures may be perceived risks of jeopardizing a sustainable venture's ecological mission and purpose when trying to scale and expand into a larger economic regime dominated by routines of economic cost and production efficiency (Hockerts & Wüstenhagen, 2010). Overall, navigating and reconciling this possible tension between maximizing the sustainability potential of an entrepreneurial idea by sticking to a radical approach and increasing adaptability to an established social-technological economic regime by conforming to established economic regime routines to a larger extent may be particularly difficult for sustainable entrepreneurs.

Entrepreneurial ecosystems around green entrepreneurs may encapsulate scope for support in several ways for sustainable ventures standing at the junction of trying to scale to the regime level or remaining in the local niche. In terms of recruiting members for a local entrepreneurial ecosystem under the roof of a shared sustainability mission as introduced above, it may be instrumental for upscaling to select novel stakeholders who (also) strive for diffusion benefits beyond the niche in addition to seeking purely intrinsic benefits of a sustainability project at the local niche level (cf. Seyfang & Smith, 2007 for these two types of benefits). For example, this could particularly involve stakeholders who would like to combat climate change or global warming at a larger national or global geographical scale. Different types of support stakeholders may be important in cultivating potential diffusion benefits from scaling a sustainable venture idea; and a rich entrepreneurial ecosystem may well involve this breadth of different institutional actors (cf. generally Stam & Van de Ven, 2021). Notably, upscaling initiatives in an entrepreneurial ecosystem could actively take actors from (local/regional/regime level) politics on board (e.g. environmental, economic or innovation policymakers). These stakeholders may act as relationship promoters spanning boundaries and providing access to regime-level institutions for infusing novel sustainability practices within an existing regime (e.g. introducing a more sustainable supply chain practice as a process

innovation). Also, actors from the political domain may serve as power promoters capable of bringing additional resources behind the upscaling moves of sustainable ventures in an ecosystem, or they may contribute to institution building for more sustainability in a specific economic domain (cf. Koch 2005 who discuss the role of different innovation promoters in the context of regional new venture support networks). This deliberate integration of instrumental “stakeholders of scaling support” may also help address typical scaling barriers of insufficient receptiveness by regime institutions and other stakeholders external to the dedicated entrepreneurial ecosystem.

6 The Intersection of Entrepreneurial Ecosystems and Upscaling: Suggestions for Future Research

This chapter strived for opening a discussion on how entrepreneurial ecosystems may support the upscaling challenges of new sustainable ventures. For the exploration of this nexus, it will be pivotal to identify workable paths to successful upscaling and compositions of ecosystem stakeholders that enable to increase the impact of sustainable ventures beyond their original niche. In particular, stakeholder support for sustainable ventures should try to avoid problematic scaling aversion of enthusiastic entrepreneurs and supporters who brought a sustainable opportunity to life in the first place. The individual upscaling path and constellation of functioning support from regional ecosystem stakeholders will likely change in the course of time. In taking such a process perspective towards upscaling, Augenstein et al. (2020, p. 146) make the important suggestion for policymakers to enable the bottom-up “innovativeness of actors to allow greater contingency in future-oriented deliberations and experimentation. . .[to avoid]. . .the dead end into which innovation policy finds itself when action is guided towards instrumentalization and the idea of controlling the emergence and impact of specific alternatives” (also cf. Koch & Grünhagen, 2009).

This type of evolutionary flexibility and openness in approaches also seems advisable in principle to avoid framing oversimplified ex ante solutions and overcome the other barriers to upscaling—namely, the Babylon and oversimplification dilemmas—in the context of venturing in entrepreneurial ecosystems. Particularly, this is since there is no common narrative of simple final solutions and ideal-type procedures available yet, neither in upscaling and transition research nor in studies on entrepreneurial ecosystems. The discourse in this chapter pointed at key elements of navigating ecosystem support for sustainable ventures as they try to upscale their ecological ideas. In summation, it will be sensible for supporting ecosystem stakeholders to:

- Not only offer support during the founding stage of sustainable ventures (which traditionally is a primary focus of entrepreneurial ecosystems) but also provide assistance during subsequent steps in the upscaling process

- Actively address the typical challenges and dilemmas faced by sustainable entrepreneurs during upscaling
- Embrace non-economic approaches to expand and promote sustainable ventures beyond traditional economic growth strategies (e.g. via collaboration with other interregional or national ecosystems or by leasing with political institutions offering scope for further regime-wide diffusion)

These key elements offer ample opportunities for future research. For improving our understanding of the particularities of challenges and how they may be tackled in sustainability upscaling from entrepreneurial ventures, we suggest to further explore, e.g. the attitudes and underpinning belief structures of both focal sustainable entrepreneurs and those of immediate supporting stakeholders (especially those that may provide vital resources and knowledge for upscaling) in terms of potential scaling aversions. This could be studied empirically alongside the above constructs of feasibility (do we have sufficient resources and knowledge to (up)scale the impact of a sustainable venture?) and desirability (do we want to (up)scale beyond our local niche?). Improving our knowledge on the attitudes of sustainable entrepreneurs and stakeholders with regard to upscaling would also benefit our understanding of the critical scaling-aversion dilemma. Overall, more empirical research on the upscaling dilemmas and their role in entrepreneurial ecosystems is necessary. Towards this end, inter- and transdisciplinary research should study the effects of these dilemmas from various perspectives such as stakeholder collaboration and networks, as well as capacity building.

In the absence of clear-cut upscaling paths and established ideal-type upscaling models, Augenstein et al. (2020) rightly call for a more reflexive and pluralistic stance towards understanding and learning how to scale sustainability initiatives successfully (be it from civil engagement or entrepreneurship). In practice, this necessitates appreciating the particularities of the original niche from which these initiatives evolve as well as considering the characteristics of the broader scale regime level and how the two are perceived by the ecosystem stakeholders in the driver seat of the upscaling process. One way to take a more open, learning-oriented stance may be the approach of translocal learning networks (Loorbach et al., 2020). Such networks would be dually anchored to integrate the specificities of the local niche at origin and to go beyond towards the regime level in a kind of translocal diffusion of sustainability ideas. This would function together with a network of external actors who operate on a larger national or even international scale (for instance the “SEA Social Entrepreneurship Academy” may function as such network platforms to increase the impact of collaborating local niche initiatives; for further information see <https://seakademie.org/>). In terms of upscaling, such networks may complement the potential of corresponding local, community-based entrepreneurial ecosystems and serve as “meta-enablers for a sustained engagement . . . beyond an individual’s efforts at venture creation” (O’Shea et al., 2021, p. 1099).

Generally, furthering the collaboration and connection between transition and entrepreneurship research appears to be highly promising. Transition research in the field of sustainable innovation focuses on the specifics of multilevel regime changes

as novel sustainable problem solutions (e.g. more ecological production procedures in an industry) struggle to change existing (non-sustainable) approaches ranging from an initial niche solution across the regime towards the landscape level. Sustainable entrepreneurs and their ventures may provide important impulses to such sustainable innovation. However sustainable entrepreneurs face critical upscaling challenges as they strive to move beyond their initial niche. Especially regarding sustainable and institutional entrepreneurship, perspectives on transitions and transformation can be expected to be beneficial for understanding the role of entrepreneurs in change processes and “transformational entrepreneurship”. In these transformations it will be challenging for sustainable ecosystems to build and maintain a clear sustainability orientation, as well as the stakeholder relationships required throughout the long-time horizon to scale sustainable ventures. With regard to these specific challenges in entrepreneurial ecosystems, a transition approach, like learning from living labs for sustainable initiatives, is deemed fruitful. Seeing entrepreneurial ecosystems as an evolutionary construct (Stam & Van de Ven, 2021; O’Shea et al., 2021) and creating spaces for reflexive discourse could help overcome barriers and challenges.

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